

Secure Group Chat: Chat and Event Management System

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During hostage negotiations it is important that police officers have a fast and secure method of communicating. The goal of our project is to research and develop a secure mobile multiple party chat and event management system for the Boone County Sheriff's Office. The chat system will be used by officers to discuss and share information during hostage negotiations, so speed, security, and reliability are critical. We met with the sheriff and his officers at the beginning of the year to discuss the current chat system and what changes needed to be made. We found that many of the functions did not work, and some of the technology used was difficult to run on modern browsers. As a result, we began with the goals of creating a chat and event management system that is easy to use across multiple devices and browsers, and one that performs all the desired functions without error. After making sure these basic requirements are met, we will focus on the security of the data and communications. The chat and event management system is implemented using a LAMP server running on a virtual machine. This allows the officers to use the system while traveling, and other users can easily connect as long as they are on the same network. After working on the project for a few months, a second meeting was held to assess our progress. The major revisions that needed to be made were making the interface more user-friendly, changing the timeline to allow for multiple cases, and modifying the chat system to avoid making too many requests to the server. Most of these features have already been implemented, and we will be installing and testing the system on the BCSO computers in the next few weeks.

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